PEDIATRIC TRAUMA CARE

The catchment area for a pediatric trauma facility is usually larger than that of an adult facility. As such, effective long-distance transportation and communication networks are necessary. It is critical that pediatric trauma care be integrated within the overall EMS system in a given community, state, or region.

Optimal care of the injured child should be reflected by patient outcome data. The quality management program should provide for a complete review of each death or disabled child, including the prehospital and hospital phases of treatment. This program also should review child safety and prevention programs, which are frequently coordinated with community or governmental activities.

HOSPITAL RESOURCES FOR CARE OF THE INJURED CHILD

Commitment on the part of the institution and its physicians is the single most important element for any hospital seeking designation as a Pediatric Trauma Regional Resource Facility. The process to designate a Pediatric Trauma Regional Resource Facility should be accomplished by an appropriately constituted agency following an impartial, external review and assessment.

The highest level of pediatric trauma care is provided in a Pediatric Trauma Regional Resource Facility. This facility will be capable of providing comprehensive care for all injured children, particularly the most severely injured in a given region. Generally, there will be only one such hospital in a region, but in certain geographic areas characterized by large and dense populations, more than one facility may be required.

The Pediatric Trauma Regional Resource Facility is generally located in either a children's hospital or a large general hospital with a pediatric surgical service and significant interest in and commitment to pediatric trauma care. To qualify as a Pediatric Trauma Regional Resource Facility, an institution must have the following elements:

- 1. An appropriately credentialed pediatric surgeon available at all times in charge of the pediatric trauma service
- 2. A designated, identifiable emergency department area specific for children, with appropriately trained staff and pediatric equipment
- 3. A separate pediatric floor or unit
- 4. Designated pediatric surgical and medical specialists available and on call
- 5. A separate pediatric ICU staffed by appropriately trained surgical and medical specialists, with appropriate equipment and other ancillary personnel
- 6. A psychosocial family support service
- 7. Special equipment necessary for resuscitation, surgery, and postoperative care

- 8. A pediatric surgeon responsible for quality of care through the pediatric trauma quality management
- 9. Physical medicine and rehabilitative services to ensure continuing care of the injured child

Many areas of the state may not have access to a Pediatric Trauma Regional Resource Facility. WHEN NO PEDIATRIC FACILITY IS AVAILABLE, CHILDREN WITH MULTISYSTEM INJURIES CAN BE TREATED IN AN ADULT TRAUMA FACILITY THAT HAS DEMONSTRATED A SIGNIFICANT COMMITMENT TO PEDIATRIC CARE.

Criteria for Pediatric Trauma Regional Resource Facilities and Adult Trauma Facilities committed to the care of injured children are outlined in Table 1. (Additional criteria concerning the care of the injured pediatric patient can be found in <u>Pediatrics</u>, May 1990.)

The frequency with which children are injured in an isolated rural environment is high. The need for resuscitation, stabilization, and transfer protocols in such an environment is clear. Community and rural hospitals should provide this function.

QUALITY MANAGEMENT

A program designed to improve pediatric trauma care and maximize resource utilization should include data accumulation and analysis methodology. Information relative to pediatric trauma care and review of these data, both with regard to local experience and in comparison with national standards, are essential. Areas of potential or actual deficiency and documentation of corrective action relating to physician care, resource utilization, public education, transfer triage and emergency medical system design are important elements of a strong program.

The Pediatric Trauma Regional Resource Facility should provide leadership, research, and education on issues related to pediatric trauma in its trauma service area. The quality management program should have a current pediatric trauma registry that contains information on all facets of pediatric trauma care. This registry should be linked to a national database for ongoing outcome evaluation and analysis.

Pediatric trauma centers should provide a leadership role in the development of broad-based injury prevention programs locally, regionally, and nationally.

HOSPITAL

Children's hospital or general hospital with a separate pediatric department General hospital with an organized pediatric service

Pediatric emergency department with appropriate personnel, equipment, and facilities

EMERGENCY DEPARTMENT

Designated pediatric area in an emergency department staffed with pediatric trauma personnel and appropriate equipment

ICU

Pediatric ICU with appropriately trained personnel and equipment

Pediatric ICU with pediatric surgery and other surgical, medical, and nursing personnel and equipment needed to care for the injured child

TRAUMA SERVICE

Pediatric trauma service administered by the pediatric surgeon and run by his/her

designee

Pediatric trauma service organized and run by a pediatric surgeon

- 1. Pediatric Surgeon
- 2. Pediatric Orthopedics
- 3. Pediatric Neurosurgeon
- 4. Pediatric Anesthesiologist
- 5. Pediatric Intensivist
- 6. Pediatric Emergency Physicians
- 7. Pediatric Radiologists
- 8. Other Pediatric Surgical Specialists
- 9. Other Medical Pediatric Specialists
- 10. Pediatric Trauma Nurse Coordinator
- 11. Pediatric Trauma Nurse

TRAUMA TEAM

- 1. Pediatric Surgeon
 - 2. General Surgeon
- 3. Orthopedics
- 4. Neurosurgeon
- 5. Surgical Critical Care Specialist
- 6. Emergency Physicians
 - 7. Radiologists
- 8. Pediatricians
- 9. Trauma Nurse Coordinator
 - 10. Pediatric-trained Trauma Nurses

E	RESEARCH	D
E	INJURY PREVENTION PROGRAM	D
E	PEDIATRIC TRAUMA SERVICE	E

TABLE 1

(continued)

PEDIATRIC TRAUMA REGIONAL RESOURCE CENTER	(continued)	ADULT TRAUMA CENTER WITH PEDIATRIC COMMITMENT E
${f E}$	PSYCHOSOCIAL SERVICES	${f E}$
E	REHABILITATION	${f E}$
E	EMERGENCY DEPARTMENT (PEDIATRICS)	E
E	PEDIATRIC INTENSIVE CARE UNIT	${f E}$
\mathbb{E}^3	24-HOUR OPERATING ROOM AVAILABILITY	\mathbf{E}^3
E))))))))))))))))))))))))))))))))))))	TRAUMA REGISTRY	E

- 1. A pediatric surgeon credentialed in trauma care will be promptly available. This responsible pediatric surgeon will be present in the operating room for any and all operative procedures. A general surgical resident at a minimum PGY4 level may initiate resuscitative care until the attending pediatric surgeon arrives.
- 2. A pediatric surgeon must be available at the hospital on short notice. Local criteria may be established that allow the pediatric surgeon to take call from outside of the hospital, but with the clear commitment on the part of the hospital and the surgical staff that the pediatric surgeon will be present in the Emergency Department at the time of arrival of the pediatric trauma patient and will be available to care for pediatric trauma patients in the ICU. The adult trauma surgeon must have special interest in and commitment to care of the injured child.
- 3. An operating room must be immediately available with in-house anesthesia and nursing personnel 24 hours a day.

TRAUMA